Herding Phenomenon During Various Market Conditions

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Abstract

This paper examines the presence of the herding phenomenon in the South African market between January 2011 and December 2019. The novel contribution of this paper is to investigate if there is an asymmetric herding phenomenon during three market conditions associated to market returns, trading volume and volatility in the market. Using the CSAD measure, we provide no evidence of the herding phenomenon in the South African market. Also we report no evidence of this phenomenon during increasing and decreasing market; during days with low trading volumes and during days with high and low volatility in the market. However, we find evidence of a weak herding phenomenon during days with high trading volumes. More specifically, the herding parameter is negative and statistically at ten percent level. These findings are eminent for investors and regulators to improve their comprehension of the South African market and the investor behavior. This research can also help investors to conceive their trading strategies during various market conditions.

Keywords: herding phenomenon, market conditions, asymmetric herding, CSAD measure, South African market

JEL Classification Codes: G14, G 41

1. Introduction

A rational investor must carry out a complete study of the financial market before taking the best investment decision. This is a difficult task due to the intricacy, uncertainty of the financial market and the speed in decision making to be able to watch out for opportunities. All these difficulties obligate investors to rely on mental shortcuts which often lead to wrong and irrational decision. To avoid this problem, some investors tend to follow the conducts of others investors whom they believe are more informed about the returns on the specific investment. The herding phenomenon leads investors to purchase or sell massively the same securities over a period of time.

Herding phenomenon can be intentional or spurious (Galariotis et al. 2016). The spurious herding is a rational herding. It is unwanted and it results when investors receive the same signals. However, the intentional herding is considered as a rational or an irrational herding. When investors copy the conducts of others investors because they think that others are more informed and experts in the domain, the intentional herding is considered as rational herding ;whereas when investors suppress their private information and blindly move with the crowd, the intentional herding is considered as irrational.

Several explanations have been proposed to justify the existence of the rational herding in stock markets (Scharfstein and Stein, 1990; Banerjee, 1992; Rajan, 1994; Prendergast and Lars, 1996). First, investors copy the conducts of others investors for the reason that they believe that others are more informed and experts in the field. Second, managers copy the crowd's investment in order to safeguard their reputation in the market. Finally, manager mimics the actions of other managers if his remuneration depends on the performance of other managers.

Herding phenomenon tend to be more pronounced during the periods of extreme market movements. During the bubble period, investors mimic the actions of others to be able to earn more money. Moreover, during the crash period, investors imitate others because they are afraid of losing their money. The bubbles and crashes known in the history and which are the damage of the herding phenomenon push practitioners to take more interest in this phenomenon for a healthy financial markets. In this context, the research problem in this paper may be expressed as follows: Is there an asymmetric herding phenomenon during three market conditions associated to market returns, trading volume and volatility in the market?

The rest of this article follows: Section two reviews previous researches on the herding phenomenon. Section three reports the data and section four methodologies used. Section five presents the findings and section six summarizes the conclusions.

2. Previous Researches on the Herding Phenomenon

Researches on herding phenomenon in different equity markets are in abundance. There are several studies exploring the herding phenomenon in whole stock market. Christie and Huang (1995), employing their measure of dispersion (market cross-sectional standard deviation (CSSD) of equity returns), provided no evidence of the herding phenomenon in the US markets. They found that during turmoil period, stock return dispersions tend to rise. Chang et al. (2000) used their measure of the dispersion namely market cross-sectional absolute deviation (CSAD) of securities returns and reported the non-existence of the herding phenomenon in the US stock market (January 1963 – December 1997), the Hong Kong market (January 1981 – December 1995) and the Japan market (January 1976 – December 1995). More specifically, they found that the rise in market return is related to a more equivalent rise in the return dispersion. However, Lam and Qiao (2015) investigated herding in the Hong Kong market by using the CSAD measure. They found that investors exhibit herding in the up-market, high trading volume and high and low volatility. Jlassi and Naoui (2015), using the daily data and the CSAD measure between January 2000 and July 2012, reported that investors engage in herding only during upward market periods and during days with abnormal high trading volume in the US markets. In the South African market, Niyitegeka and Tewari (2015) employed the auto-regressive distributed lag approach and found that this stock market is affected by the herding phenomenon between August 2006 and August 2011. They also reported that this phenomenon is associated to up-market. Guney et al. (2017) tested the existence of the herding phenomenon in eight African stock markets, by using the model introduced by Chang et al. (2000). They found that this phenomenon is present for all market studied over the period from January 2002 to July 2015. They also reported that the herding phenomenon is stronger for small securities than large securities. Chen et al. (2017), employing the daily data and the CSAD measure between January 2008 and November 2015, documented that herding phenomenon is stronger during rising market conditions in the Chinese stock market. In the Egyptian stock market, Mertzanis and Allam (2018) reported no evidence of the herding phenomenon during bull and bear market when they used the CSSD and the CSAD measures over the period from January 2000 to April 2014. Choi and Yoon (2020), using the daily data and the CSAD measure, reported that there is no evidence of the herding phenomenon in the Korean stock market between January 2003 and December 2018. However, they found that Korean investors exhibit herding during decreasing market and during days with high trading volumes. Ju (2020) examined the herding phenomenon in the Chinese A and B-share markets by using the CSAD measure. He reported that on the A-share market, the herding phenomenon is stronger during decreasing market. More specifically, on this market, investors herd for small and growth securities during increasing and decreasing market while they herd for large and value securities only in decreasing market. On the other hand, on the B-share market, investors herd for all type of securities (small, large, value, growth) and during increasing and decreasing market.

Others studies have investigated the herding phenomenon at sector level (industry herding) in various stock markets. The study of the industry herding allows researchers to know with more precision the sectors that are the most or the least affected by the herding phenomenon. In the Taiwanese stock market, Demier et al. (2010), using the model of Chang et al. (2000) and the model proposed by Hwang and Salmon (2004), reported that the herding phenomenon of market participant is present for all sectors other than the automotive and tourism sectors. Ganesh et al. (2016) tested the existence of the industry herding in the Indian stock market by employing the CSSD and CSAD measures. They found that this stock market is not affected by industry herding between April 2005 and March 2015. Zheng et al. (2017) examined the existence of the industry herding phenomenon in nine Asian markets. Using the daily data and the modified version of the CSAD, they found that in these markets, herding phenomenon is more pronounced in technology and financial sectors and less pronounced in utility sector. They also reported that the herding phenomenon at sector level is stronger during decreasing market and during days with low trading volumes. In the South African market, Ababio and Mwamba (2017) found that the whole financial industry displayed the herding phenomenon only during increasing market over the period from January 2010 and September 2015 when they used the quantile regression model. They also reported that the herding phenomenon in the banking sector exists only during decreasing market. However, in the real estate sector, this phenomenon is present only during increasing market. In the French stock market, Litimi (2017) employed the daily data of all traded firms during the period of January 2000 through December 2016 and found that the herding phenomenon is present in only some sector (five out eleven). The five sectors are: Consumer good, Consumer services, Financials, Oil & Gas, and Others. Dhall and Singh (2020) examined the presence of the industry herding in the Indian stock market during the whole, pre and

post-Covid 19 outbreak phases. Using the CSAD measure, they found that this stock market is not affected by the industry herding during the whole period (1 January 2015 – 1 June 2020) and the pre-Covid 19 phase (1 January 2015 – 29 January 2020). However, they provided evidence of the industry herding during the post-Covid 19 phase (30 January 2020 – 1 June 2020). They concluded that the Covid 19 pandemic provoked the generation of the industry herding in the Indian stock market.

Herding phenomenon has been examined by many researchers before, during and after the crisis period. Choe et al. (1999) found that foreign investors on the Korean stock market exhibit herding before the phase of Korea's economic crisis. However, they documented no evidence of the herding phenomenon during this crisis. Economou et al. (2011) found that the herding phenomenon is strong before and after the 2008 global financial crisis in four stock markets (Italy, Spain, Greece and Portugal). In the Indian stock market, Bhaduri and Mahapatra (2013) documented more evidence of the herding phenomenon on periods of important crashes which happened between 2006 and 2008. Hanafi and Abaoub (2016), using the CSAD measure reported that during the Tunisian revolution, the herding phenomenon exists in up and down market. However, before the Tunisian revolution this phenomenon exists only in the up-market. Wu et al. (2020) analyzed the herding phenomenon in the Shanghai A-Share market and the Shenzhen A-Share market during the Covid 19 outbreak phase and during the extreme market conditions provoked by the Covid 19 pandemic. They reported that the herding phenomenon is less pronounced during the Covid 19 period (3 June 2019 – 12 October 2020). However, they found that the herding phenomenon is strong during increasing market, during days with low trading volumes and during days with low volatility in the two Chinese stock markets. On the other hand, Espinosa-Mendez and Arias (2021) examined the impact of the Covid 19 pandemic on the herding phenomenon in five European stock markets (UK, Germany, France, Italy and Spain) between January 2000 and June 2020. They found, using the CSAD measure, that the Covid 19 pandemic boosts the herding phenomenon in all studied stock markets.

There are little studies exploring the herding phenomenon in the South African market, the largest stock market in the African continent with a market capitalization of around one trillion US dollars in 2019. Niyitegeka and Tewari (2015) utilized the auto-regressive distributed lag approach and found that the South African market is affected by the herding phenomenon between August 2006 and August 2011. They also reported that this phenomenon is associated to up-market. In the South African market, Ababio and Mwamba (2017) also documented that the whole financial industry displayed the herding phenomenon over the period from January 2010 to September 2015 only during increasing market when they applied the quantile regression model. However, up to now, there is no published investigation exploring if there is an asymmetric herding phenomenon in the South African market during numerous market conditions. Moreover, there is no study used the popular CSAD measure to test the existence of the herding phenomenon in the South African context. Then, in this current investigation, we examine the presence of herding phenomenon in the South African market by using the CSAD measure between January 2011 and December 2019. Also, we try to explore if there is an asymmetric herding phenomenon in the South African market during three market conditions associated to market returns, trading volume and volatility in the market. This paper will enrich the extant literature by investigating the herding phenomenon during various market conditions associated to market returns, trading volume and volatility in the market. Its results are also eminent for investors and regulators to improve their comprehension of the South African market and the investor behavior.

3. Data

The data applied in our investigation consist of the daily closing prices and trading volumes of the most active securities traded on the South African market during January 2011 and December 2019 (2345 observations). These data were obtained from www.investing.com.

The daily closing prices are used to calculate the daily return of stock. The latter is computed as the difference in the natural log of the mean closing price of security between day t and t-1. The return of the market on day t is determined by dividing the sum of the returns of all stocks by the number of firms listed on day t.

4. Methodologies

4.1 Evidence of Herding Phenomenon Employing CSAD Measure

To test the existence of the herding phenomenon in the South African market, we employ the Chang, Cheng and Korona (2000) model (CCK). This model is formulated as follows:

$$CSAD_t = \gamma_0 + \gamma_1 |R_{m,t}| + \gamma_2 R_{m,t}^2 + \varepsilon_t \tag{1}$$

Where,

$CSAD_t$: corresponds to the cross-sectional average deviation of returns on day t; $R_{m,t}$ represents the market portfolio return on day t. $R_{m,t}^2$ is the square of $R_{m,t}$; γ_0, γ_1 and γ_2 are the coefficients to be estimated and ε_t is the error term.

The measure of return dispersion ($CSAD_t$) is defined as:

$$CSAD_t = \frac{\sum_{i=1}^{n}|R_{i,t} - R_{m,t}|}{N} \tag{2}$$

Where,

$R_{i,t}$: corresponds to the equity return of company i on day t and N is the number of companies in the portfolio.

To display evidence of herding phenomenon, the herding parameter γ_2 should be negative and statistically significant. However, a significantly positive γ_2 is exhibitive of no herding phenomenon.

4.2 Herding Asymmetry in Three Market Conditions

This study investigates if there is an asymmetric herding phenomenon in the South African market during three market conditions associated to market returns, trading volume and volatility in market.

4.2.1 Market Condition Associated to Market Returns

To investigate if the direction of market return (positive market returns or negative market returns) has an impact on the herding phenomenon, two independent regression equations, proposed by CCK (2000) are employed:

$$CSAD_t^{up} = \gamma_0 + \gamma_1^{up}\left|R_{m,t}^{up}\right| + \gamma_2^{up}\left(R_{m,t}^{up}\right)^2 + \varepsilon_t \quad \text{if } R_{m,t} > 0 \tag{3}$$

$$CSAD_t^{down} = \gamma_0 + \gamma_1^{down}\left|R_{m,t}^{down}\right| + \gamma_2^{down}\left(R_{m,t}^{down}\right)^2 + \varepsilon_t \quad \text{if } R_{m,t} < 0 \tag{4}$$

Where,

$CSAD_t^{up}$: is the CSAD on day t when market is up.

$CSAD_t^{down}$: is the CSAD on day t when market is down.

$R_{m,t}^{up}$: is the market portfolio return on day t when the market is up.

$R_{m,t}^{down}$: is the market portfolio return on day t when the market is down.

To display evidence of herding phenomenon, the parameters γ_2^{up} and γ_2^{down} should be negative and statistically significant. If the parameter γ_2^{up} is more negative and statistically significant than γ_2^{down}, this signify that the herding phenomenon is more pronounced when the market rises than when the market declines.

4.2.2 Market Condition Associated to Trading Volume

Following Tan et al. (2008), the trading volume is described as high (low) if on day t; it is larger (smaller) than the precedent thirty-day moving mean. To test if the market condition associated to trading volume has an impact on the herding phenomenon; two independent regression equations are employed:

$$CSAD_t^{V-High} = \gamma_0 + \gamma_1^{V-High}\left|R_{m,t}^{V-High}\right| + \gamma_2^{V-High}\left(R_{m,t}^{V-High}\right)^2 + \varepsilon_t \tag{5}$$

$$CSAD_t^{V-Low} = \gamma_0 + \gamma_1^{V-Low}\left|R_{m,t}^{V-Low}\right| + \gamma_2^{V-Low}\left(R_{m,t}^{V-Low}\right)^2 + \varepsilon_t \tag{6}$$

Where,

$CSAD_t^{V-High}$: is the CSAD on day t when trading volumes are high.

$CSAD_t^{V-Low}$: is the CSAD on day t when trading volumes are low.

$R_{m,t}^{V-High}$: is the market portfolio return on day t when trading volumes are high.

$R_{m,t}^{V-Low}$: is the market portfolio return on day t when trading volumes are low.

If the parameters γ_2^{V-High} and γ_2^{V-Low} are negative and statistically significant then, the herding phenomenon is present. If the parameter γ_2^{V-High} is more negative and statistically significant than γ_2^{V-Low}, this signify that the herding phenomenon is more pronounced when the trading volumes are high.

4.2.3 Market Condition Associated to Volatility in the Market

Following Tan et al. (2008), the volatility in the market (δ^2) is described as high (low) if on day t; it is larger (smaller) than the precedent thirty-day moving mean. To test if the market condition associated to the volatility in the market has an impact on the herding phenomenon; two independent regression equations are employed:

$$CSAD_t^{\delta^2-High} = \gamma_0 + \gamma_1^{\delta^2-High}\left|R_{m,t}^{\delta^2-High}\right| + \gamma_2^{\delta^2-High}\left(R_{m,t}^{\delta^2-High}\right)^2 + \varepsilon_t \qquad (7)$$

$$CSAD_t^{\delta^2-Low} = \gamma_0 + \gamma_1^{\delta^2-Low}\left|R_{m,t}^{\delta^2-Low}\right| + \gamma_2^{\delta^2-Low}\left(R_{m,t}^{\delta^2-Low}\right)^2 + \varepsilon_t \qquad (8)$$

Where,

$CSAD_t^{\delta^2-High}$: is the CSAD on day t when the volatility in the market is high.

$CSAD_t^{\delta^2-Low}$: is the CSAD on day t when the volatility in the market is low.

$R_{m,t}^{\delta^2-High}$: is the market portfolio return on day t when the volatility in the market is high.

$R_{m,t}^{\delta^2-Low}$: is the market portfolio return on day t when the volatility in the market is low.

If the parameters $\gamma_2^{\delta^2-High}$ and $\gamma_2^{\delta^2-Low}$ are negative and statistically significant then, herding phenomenon is present. If the parameter $\gamma_2^{\delta^2-High}$ is more negative and statistically significant than $\gamma_2^{\delta^2-Low}$, this signify that the herding phenomenon is more pronounced when the volatility in the market is high.

5. Empirical Results

Descriptive statistics for $R_{m,t}$ and $CSAD_t$ are displayed in Table 1. From this table, we see that the value of market return is positive. The $R_{m,t}$ is negatively skewned, signifying that the $R_{m,t}$ possesses values lower than the average. However, the $CSAD_t$ is positively skewed, indicating that the $CSAD_t$ possesses values higher than the average. The $CSAD_t$ and $R_{m,t}$ display excess kurtosis (higher than three), meaning that the series of $R_{m,t}$ and $CSAD_t$ are leptokurtic. The Jarque-Bera statistics also display that the series of $R_{m,t}$ and $CSAD_t$ are non- normal at one percent level.

Table 1. Descriptive statistics for $R_{m,t}$ and $CSAD_t$

	$R_{m,t}$	$CSAD_t$
Mean	0.0002	0.0146
SD	0.0197	0.0069
Skewness	- 0.240	2.085
Kurtosis	8.164	10.385
J.B Test	2529.11[***]	6894.46[***]

Note: three asterisks designate significance at 1% level.

The results of the estimation of regression (1) are displayed in Table 2. It should be remembered that to display evidence of the herding phenomenon, the herding parameter γ_2 is anticipated to be negative and statistically significant. The findings in table 2 display a positive and statistically significant herding parameter in the South African market. This result indicates the absence of herding phenomenon in this stock market. In other words, the rise in market return is related to a more equivalent rise in the return dispersion. Our results are not in line with those

documented by Niyitegeka and Tewari (2015) in the South African market. They reported that investors engage in herding only during upward market periods between August 2006 and August 2011. The difference in results may be due to the fact that in their study of the herding phenomenon, Niyitegeka and Tewari (2015) used the auto-regressive distributed lag approach. However, in our study, we apply the popular CSAD measure. Moreover, our results can be explained by the fact that during the last ten years, the policymakers have implemented policies that ameliorate the degree of informational efficiency in the South African market and boost the market integration with developed stock markets for technology transfer. In July 2012, the South African market starts to set up a new trading platform. The latter leads to improve liquidity in the market.

Table 2. Results of the estimation of regression (1)

Model: $CSAD_t = \gamma_0 + \gamma_1|R_{m,t}| + \gamma_2 R_{m,t}^2 + \varepsilon_t$	
γ_0	1.032*** (0.000)
γ_1	0.284*** (0.000)
γ_2	0.009*** (0.000)
Adjusted R^2	0.47

Note: The p-values are in parentheses, with three asterisks designating significance at 1% level.

Table 3 shows the results of the estimation of regressions (3) and (4). The findings in table 3 exhibit that the herding coefficient γ_2 is positive and statistically significant when the market rises and it is insignificant when the market declines. Our results provide no evidence of herding phenomenon during increasing and decreasing market. More specifically, the direction of market return (positive market returns or negative market returns) has not an impact on the herding phenomenon. Our findings are similar to findings documented by Mertzanis and Allam (2018) in the Egyptian stock market when they employed the CSSD and the CSAD measures over the period from January 2000 to April 2014.

Table 3. Results of the estimation of regressions (3) and (4)

Model: $CSAD_t^{up} = \gamma_0 + \gamma_1{}^{up}|R_{m,t}^{up}| + \gamma_2{}^{up}(R_{m,t}^{up})^2 + \varepsilon_t \ \ if \ R_{m,t} > 0$	
γ_0	1.095*** (0.000)
$\gamma_1{}^{up}$	0.156*** (0.000)
$\gamma_2{}^{up}$	0.015*** (0.000)
Adjusted R^2	0.31

Model: $CSAD_t^{down} = \gamma_0 + \gamma_1{}^{down}|R_{m,t}^{down}| + \gamma_2{}^{down}(R_{m,t}^{down})^2 + \varepsilon_t \ \ if \ R_{m,t} < 0$	
γ_0	0.985*** (0.000)
$\gamma_1{}^{down}$	0.398*** (0.000)
$\gamma_2{}^{down}$	0.002 (0.595)
Adjusted R^2	0.63

Note: The p-values are in parentheses, with three asterisks designating significance at 1% level.

The results of the estimation of regressions (5) and (6) are displayed in table (4). The results in this table display that the herding parameter γ_2 is negative and statistically significant at ten percent level during days with high trading volumes and it is insignificant when trading volumes are low. Our results provide evidence of a weak herding phenomenon during days with high trading volumes. However, this phenomenon is absent when trading volumes are low. Then, we can conclude that the market condition associated to trading volume has an impact on the herding

phenomenon. This result can be explained by the fact that trading volumes in the South African market are in most cases high and can be considered by investors as being more communicative. Our findings are in line with those reported by Lam and Qiao (2015) and Jlassi and Naoui (2015) in the Hong Kong and the US markets respectively.

Table 4. Results of the estimation of regressions (5) and (6)

Model: $CSAD_t^{V-High} = \gamma_0 + \gamma_1^{V-High}\left|R_{m,t}^{V-High}\right| + \gamma_2^{V-High}\left(R_{m,t}^{V-High}\right)^2 + \varepsilon_t$

γ_0	1.447*** (0.000)
γ_1^{V-High}	0.013*** (0.000)
γ_2^{V-High}	- 0.0002* (0.064)
Adjusted R²	0.03

Model: $CSAD_t^{V-Low} = \gamma_0 + \gamma_1^{V-Low}\left|R_{m,t}^{V-Low}\right| + \gamma_2^{V-Low}\left(R_{m,t}^{V-Low}\right)^2 + \varepsilon_t$

γ_0	1.346*** (0.000)
γ_1^{V-Low}	0.002 (0.598)
γ_2^{V-Low}	- 0.00003 (0.154)
Adjusted R²	0.004

Note: The p-values are in parentheses, with one and three asterisks denoting significance at the 10% and 1% levels consecutively.

Table 5 shows the results of the estimation of regressions (7) and (8). From this table, we note that the herding parameter γ_2 is insignificant during days with high and low volatility in the market. Our results provide no evidence of the herding phenomenon when the volatility in the market is high and low. Then, we can conclude than the market direction associated to the volatility in the market has no an impact on herding the herding phenomenon in the South African market. Our findings are in line with those reported by Choi and Yoon (2020). They used the daily data and the CSAD measure and reported that there is no evidence of the herding phenomenon in the Korean stock market during days with high and low volatility between January 2003 and December 2018.

Table 5. Results of the estimation of regressions (7) and (8)

Model: $CSAD_t^{\delta^2-High} = \gamma_0 + \gamma_1^{\delta^2-High}\left|R_{m,t}^{\delta^2-High}\right| + \gamma_2^{\delta^2-High}\left(R_{m,t}^{\delta^2-High}\right)^2 + \varepsilon_t$

γ_0	0.914*** (0.000)
$\gamma_1^{\delta^2-High}$	0.342*** (0.000)
$\gamma_2^{\delta^2-High}$	0.004 (0.308)
Adjusted R²	0.54

Model: $CSAD_t^{\delta^2-Low} = \gamma_0 + \gamma_1^{\delta^2-Low}\left|R_{m,t}^{\delta^2-Low}\right| + \gamma_2^{\delta^2-Low}\left(R_{m,t}^{\delta^2-Low}\right)^2 + \varepsilon_t$

γ_0	1.107*** (0.000)
$\gamma_1^{\delta^2-Low}$	0.184*** (0.000)
$\gamma_2^{\delta^2-Low}$	0.041 (0.003)
Adjusted R²	0.20

Note: The p-values are in parentheses, with three asterisks designating significance at 1% level.

6. Conclusions

The study of the herding phenomenon in stock markets interests academics and practitioners for healthy markets. This phenomenon can be an important source of the bubbles and crashes known in the history. This paper investigates the existence of the herding phenomenon in the South African market from January 2011 to December 2019. This paper also examines if there is an asymmetric herding phenomenon during three market conditions associated to market returns, trading volume and volatility in the market. Employing the CSAD measure, we find that the herding phenomenon is not present in the South African market. Also we report no evidence of this phenomenon during increasing and decreasing market; during days with low trading volumes and during days with high and low volatility in the market. However, we find evidence of a weak herding phenomenon during days with high trading volumes. More specifically, the herding parameter is negative and statistically at ten percent level. Then, we can conclude that the South African market is almost efficient in terms of herding information. Our results can be explained by the fact that during the last ten years, policymakers have implemented policies that ameliorate the degree of informational efficiency in the South African market and boost the market integration with developed stock markets for technology transfer. The results found by this study may improve investors' comprehension of the South African market and help them to conceive their trading strategies during various market conditions. The presence of a significantly weak herding phenomenon during days with high trading volumes should warn investors not to pursue the stocks with the extremely large returns to avoid losing their money. The failure to take into account the sectors of activity in the study of the herding phenomenon can be considered as a limitation of this study. Then, in our future research, we propose to investigate the herding phenomenon at sector level (industry herding) in the South African market during various market conditions.

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